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TO: Members, Technical Committee on Respiratory Protection Equipment
Members, Technical Correlating Committee on Fire and Emergency Services
Protective Clothing and Equipment

FROM: Bruce W. Teele, Staff Liaison

DATE: 22 April 2010

SUBJECT: High Air Flow PAPRs

As most of you know, the NFPA Standards Council is currently soliciting public input on the need for a new standard on high air flow PAPRs for emergency services operating in non-IDLH environments. It is important for all of you to get persons and organizations to respond with their reasons as to why this standard is needed. This input needs to come from non-Committee members and provide the Standards Council with the background of their operations where such respirators are needed. Of course, Committee members can also provide their input but the Standards Council wants other agencies and organizations to also weigh-in on this issue.

The NFPA Standards Council will be reviewing the public input at their August meeting and then decide whether or not to “approve” the TC undertaking the development of the new standard. All public input must be sent to:

Codes and Standards Administration, NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471

Below is the solicitation from the Standards Council for such input. You can see the full *NFPA News* on the NFPA website under Codes and Standards. **While the April 2010 edition of *NFPA News* states the responses need to be received at NFPA by 11 June 2010, I strongly recommend that they are submitted by 21 May 2010.** The Standards Council will be meeting at NFPA Headquarters on 3 – 5 August 2010.

NFPA NEWS, APRIL 2010

Request for New Projects

At their March, 2010 Standards Council meeting, the Council reviewed requests for four new projects and voted to publish these requests for comment and review.

Anyone interested in commenting on these proposed projects is invited to do so in writing. Please include information on resources on the subject matter, the names of those interested in participating on the Committee (if established), the names of other organizations actively involved with this subject, and whether there is a need for such a project.

Responses should be sent to Codes and Standards Administration, NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471, by **June 11, 2010**.

Powered Air Purifying Respirators (PAPRs)

a. Proposed Document Scope: Specify minimum requirements for the design, performance, testing, NIOSH certification, and independent third-party certification for high air flow powered air purifying respirators (PAPRs) for emergency services operations at incidents involving chemical agents, toxic industrial chemicals, toxic industrial materials, biological agents, and radioactive particulates.

b. Provide an explanation and any evidence of the need for the new project/document:

With the Global War on Terrorism fully underway, the rise of rouge nations and state sponsored terrorism, and in accordance with all tenants of the 4th generation warfare in which we now find ourselves, we must rethink our respiratory protection response from one that is exclusively civilian or industrial in nature.

Extensive operations in less than IDLH operations will require a PAPR that provides sufficient respiratory protection at realistic respiratory rates that are indicative of rescue, medical triage and extended decontamination operations.

c. Identify intended users of the new project/document:

Fire departments, police departments, civil first responders, civil first receivers (medical triage personnel), Department of Defense, and the Department of Homeland Security.

d. Identify individuals, groups, and organizations that should review and provide input on the need for the proposed new project/document; and provide contact information for these groups:

DoD (TSWG, USMC, USAF, & USA), DHS (USCG), fire departments, police departments, FEMA, USAR teams, technical rescue teams, CDC/NIOSH, & the NFPA TC on Respiratory Protection.

e. Identify individuals, groups, and organizations that will be or could be affected, either directly or indirectly, by the proposed new project/document, and what benefit they will receive by having this new document available:

DoD, DHS, all civil fire fighters, law enforcement, medical workers, and manufacturers of respiratory protection equipment.

Benefits would include greater general comprehension of the parameters of respiratory protection provided or not provided by APRs in terms of defining the conditions found in the area of operations [ambient weather, relative humidity, respiratory rate, and type and concentration of the contaminant(s)].

The opportunities for management of the consequences of a weapon of mass destruction incident inside the continental United States will increase on a level that corresponds with the rise of state sponsored terrorism. Mitigation of these consequences and to restore continuity of government will require extended operations in contaminated areas that have atmospheres that are less than IDLH but are still hazardous to respiratory and dermal tissues.

f. Identify other related documents and projects on the subject both within NFPA and external to NFPA:

Human cyclic respiratory rates in PPE conducting rescue, decontamination, medical triage, and/or combat operations, including work conducted by NavAir (Kaufman) and University of Waterloo. Also reference the ISO work rates which have been reestablished to include higher respiratory flow rates. Filter and filtration dynamics, including work conducted by ECBC and Battelle. [Specific references can be provided upon request.]

g. Identify the technical expertise and interest necessary to develop the project/document, and if the Committee membership currently contains this expertise and interest:

Expertise on human respirations and human physiology.

Expertise on PAPR manufacturing and filter optimization.

Expertise on the characterization of contamination concentrations in the field and in urban areas.

The committee currently has the necessary expertise in the PAPR manufacturing and optimization arena as well as the contamination concentrations in the field arena. There is a concern that there is not sufficient expertise on human respirations and physiology.

h. Provide an estimate on the amount of time needed to develop the new project/document:

Unknown, this is a multifaceted challenge one of framing or characterizing the nature of the threat, accurately assessing the situation at the area of operations, and selecting the respiratory protection that is appropriate for the situation. A minimum of one year would be recommended.

i. Comment on the availability of data and other information that exists or would be needed to substantiate the technical requirements and other provisions of the proposed new project/ document:

I believe that the data and information exists, the challenge is gathering it all together in one committee for one expressed purpose. Related studies are ongoing with the Technical Support Working Group, Georgia Technical Research Institute, and Battelle Memorial Institute's aerosol studies laboratory.

[Technical references referred to in this document can be provided upon request.]

PLEASE DO NOT PUT THIS OFF!

**CONTACT AS MANY PERSONS, ORGANIZATIONS, OR AGENCIES THAT YOU KNOW OR
WORK WITH AND FOLLOW UP TO BE SURE THEY HAVE/WILL SUBMIT THEIR
COMMENTS TO THE STANDARDS COUNCIL.**